

## WHAT IS CLAIMED IS:

1. A communication type map display apparatus, comprising:

an inputting unit for inputting an instruction;

5 a map data obtaining unit for communicating with a device exterior thereto to obtain map data;

a storage unit for storing said map data obtained by said map data obtaining unit;

10 an area screen data generating unit for generating area screen data to be used to confirm an area to be indicated based on said map data stored in said storage unit;

a map screen data generating unit for generating map screen data indicative of a map based on said map data stored in said storage unit; and

15 a display unit for displaying at least one of screens including an area screen based on said area screen data and a map screen based on said map screen data, and in which

said area screen data generating unit is operative to generate said area screen data in such a manner that an area of a map corresponding to said map data to be obtained by said map data obtaining unit and an area corresponding to said map data stored in said storage unit are recognized as being distinct from each other in said area screen under the condition that said instruction inputted by said inputting unit requests to obtain said map data.

2. A communication type map display apparatus, comprising;

an inputting unit for inputting an instruction;

25 a map data obtaining unit for communicating with a device exterior thereto to obtain map data;

a storage unit for storing said map data obtained by said map data obtaining unit;

30 an available storage capacity judging unit for judging whether or not there is an available storage capacity in said storage unit for storing said map data to be obtained by said map data obtaining unit;

35 a deletion data deciding unit for deciding map data to be deleted from said storage unit in the case that said available storage capacity judging unit judges that there is no available storage capacity for storing said map data to be obtained by said map data obtaining unit;

an area screen data generating unit for generating area screen data to be used to

confirm an area to be indicated based on said map data stored in said storage unit;

a map screen data generating unit for generating map screen data indicative of a map based on said map data stored in said storage unit; and

a display unit for displaying at least one of screens including an area screen  
5 based on said area screen data and a map screen based on said map screen data, and in which

said area screen data generating unit is operative to generate said area screen data in such a manner that an area corresponding to said map data decided to be deleted by said deletion data deciding unit from said storage unit and an area corresponding to  
10 said map data stored in said storage unit are recognized as being distinct from each other in said area screen under the condition that said instruction inputted by said inputting unit requests to obtain said map data.

3. A communication type map display apparatus as set forth in claim 2, in which

said area screen data generating unit is operative to generate said area screen data in such a manner that an area of a map corresponding to said map data to be obtained by said map data obtaining unit is recognized as being further distinct in said area screen under the condition that said instruction inputted by said inputting unit requests to obtain said map data.  
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4. A communication type map display apparatus as set forth in claim 1, in which

said area screen data generating unit is operative to generate said area screen data in such a manner that an area corresponding to said map screen previously displayed by said display unit is recognized as being further distinct in said area screen.  
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5. A communication type map display apparatus as set forth in claim 1, in which

said inputting unit includes position detecting means for detecting a current position, and

said map data obtaining unit is operative to obtain map data indicative of an area including said current position under the condition that said map data indicative of said area including said current position is not stored in said storage unit.  
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6. A communication type map display apparatus as set forth in claim 1, in which

said map data obtaining unit is operative to obtain map data indicative of an area corresponding to a map screen to be scrolled and displayed by said display unit under the condition that said instruction inputted by said inputting unit requests to scroll  
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said map screen displayed by said display unit, and said map data indicative of said map screen to be scrolled and displayed by said display unit is not stored in said storage unit.

7. A communication type map display apparatus as set forth in claim 1, in which  
5 said map screen data generating unit includes a blank map data generating section for generating blank map data indicative of a blank map, and

said map screen data generating unit is operative to generate map screen data indicative of an area corresponding to a map screen to be scrolled and displayed by said display unit based on said blank map data generated by said blank map data generating  
10 section under the condition that said instruction inputted by said inputting unit requests to scroll said map screen displayed by said display unit, and said map data indicative of said map screen to be scrolled and displayed by said display unit is not stored in said storage unit.

15 8. A communication type map display apparatus as set forth in claim 7, which further comprises:

a blank map area detecting unit for detecting a blank map area indicated based on said map screen data generated by said map screen data generating unit on the basis of said blank map data in said map screen displayed by said display unit, and in which

20 said map data obtaining unit is operative to obtain map data corresponding to said blank map area under the condition that said blank map area is larger in area than a predetermined value.

9. A communication type map display apparatus as set forth in claim 1, in which  
25 said area screen data generating unit is operative to generate area screen data based on a scale size, and said map screen data generating unit is operative to generate map screen data based on said scale size under the condition that said instruction inputted by said inputting unit requests to change the scale sizes of said area screen and said map screen displayed by said display unit.

30 10. A communication type map display apparatus, comprising:  
an inputting unit for inputting an instruction;  
a map data obtaining unit for communicating with a device exterior thereto to obtain map data;

35 a storage unit for storing said map data obtained by said map data obtaining unit;

a deletion order deciding unit for deciding an order of map data to be deleted from said storage unit in the case that there is no available storage capacity for storing said map data to be obtained by said map data obtaining unit;

an area screen data generating unit for generating area screen data to be used to  
5 confirm an area to be indicated based on said map data stored in said storage unit;

a map screen data generating unit for generating map screen data indicative of a map based on said map data stored in said storage unit; and

a display unit for displaying at least one of screens including an area screen based on said area screen data and a map screen based on said map screen data, and in  
10 which

said area screen data generating unit is operative to generate said area screen data in such a manner that said order of map data to be deleted decided by said deletion order deciding unit is recognized as being distinct in said area screen under the condition that said instruction inputted by said inputting unit requests to switch said  
15 screen displayed by said map screen from said map screen to said area screen.

11. A communication type map display apparatus as set forth in claim 10, in which said area screen data generating unit is operative to generate said area screen data in such a manner that said order of map data to be deleted decided by said deletion  
20 order deciding unit is indicated by said display unit as a number.

12. A communication type map display apparatus as set forth in claim 10, in which said area screen data generating unit is operative to generate said area screen data in such a manner that said order of map data to be deleted decided by said deletion  
25 order deciding unit is indicated by said display unit at predetermined time intervals.

13. A communication type map display apparatus as set forth in claim 10, in which said area screen data generating unit is operative to generate said area screen data in such a manner that an area to be indicated based on said map data decided by  
30 said deletion order deciding unit to be deleted in order of the number equal to the number of instructions inputted by said inputting unit is recognized as being distinct in said area screen under the condition that said instruction inputted by said inputting unit requests to confirm said order of map data to be deleted decided by said deletion order deciding unit.

35 14. A communication type map display apparatus as set forth in claim 10, in which

said deletion order deciding unit is operative to decide an order of map data to be deleted from said storage unit in accordance with an order indicated by said instruction inputted by said inputting unit under the condition that said instruction inputted by said inputting unit requests to indicate map data to be deleted from said storage unit.

15. A communication type map display apparatus as set forth in claim 10, in which said deletion order deciding unit is operative to decide map data to be deleted from said storage unit, in such a manner that map data indicated by said instruction inputted by said inputting unit is excluded under the condition that said instruction inputted by said inputting unit requests to indicate map data not to be deleted from said storage unit.

16. A communication type map display apparatus as set forth in claim 1, in which said display unit is operative to display a window on said map screen in such a manner that said area screen is displayed within said window in the case that said area screen and said map screen are displayed by said display unit.